Pacific Ethanol Magic Valley, LLC Fugitive Dust Emissions from Truck Traffic, FS01

E= [k * (sL/2)^0.65 * (W/3)^1.5 - C](1-(P/4N))

AP-42.	Section	13.2.2-1

= [1: (022) 0:00 (1:20) 1:0 0 [1:10]					
Factor	Description	Source	PM Value	PM ₁₀ Value	PM _{2.5} Value
E =	Emission factor (lb/VMT)	Calculation, above	1.06	0.21	0.03
k =	PM Particle size multiplier (lb/VMT)	AP-42, Section 13.2.1	0.082	0.016	0.0024
sL =	Road surface silt loading (g/m²)	AP-42, Section 13.2.1-2	0.60	0.60	0.60
C =	Vehicle exhaust emission factor		0.0005	0.0005	0.0004
P=	Number of "wet" days in an averaging period		90	90	90
N =	Number of days in an averaging period		365	365	365
W =	Mean vehicle weight (ton)		29.00	29.00	29.0

PM Emissions from Paved Roads

Activity	Quantity Transported per truck	No. of Trucks (truck/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM Emissions (lb/yr)	Uncontrolled PM Emissions (tpy)
Grain receiving	25 ton	25.169	0.50	12.584	13,306	6.65
Wet Cake haul out	25 ton	24,579	0.50	12,289	12,994	6.50
Ethanol haul out	8,000 gal	7,875	0.32	2,520	2,665	1.33
Denaturant delivery	8,000 gal	375	0.32	120	127	0.06
Grain Loadout	25 ton	21,900	0.50	10,950	11,578	5.79
Total						20.33

PM₁₀ Emissions from Paved Roads

Activity	Quantity Transported per truck	No. of Trucks (truck/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM ₁₀ Emissions (lb/yr)	Uncontrolled PM ₁₀ Emissions (tpy)
Grain receiving	25 ton	25,169	0.50	12,584	2,596	1.30
Wet Cake haul out	25 ton	24,579	0.50	12,289	2,535	1.27
Ethanol haul out	8,000 gal	7,875	0.32	2,520	520	0.26
Denaturant delivery	8,000 gal	375	0.32	120	25	0.01
Grain Loadout	25 ton	21,900	0.50	10,950	2,259	1.13
Total						3.97

PM_{2.5} Emissions from Paved Roads

Activity	Quantity Transported per truck	No. of Trucks (truck/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM _{2.5} Emissions (lb/yr)	Uncontrolled PM _{2.5} Emissions (tpy)
Grain receiving	25 ton	25,169	0.50	12,584	389	0.19
Wet Cake haul out	25 ton	24,579	0.50	12,289	380	0.19
Ethanol haul out	8,000 gal	7,875	0.32	2,520	78	0.04
Denaturant delivery	8,000 gal	375	0.32	120	4	0.00
Grain Loadout	25 ton	21,900	0.50	10,950	339	0.17
Total						0.60

Pacific Ethanol Magic Valley, LLC Wetcake Storage Emissions, FS03

Wetcake emissions based on November 2, 2004 test data from a wetcake storage building at DENCO, LLC in Morris, MN.

Normal Operating Scenario

Production Rates:

18 tons/hr wetcake (wet basis) production @ DENCO

70.1 tons/hr wetcake (wet basis) production @ Pacific Ethanol Magic Valley, LLC (Max)

DENCO Test Results* -> Emission Factor -> Magic Valley Estimated Emissions

Detection?**	Pollutant	DENCO lb/hr @ 18 ton/hr production rate	Emission Factor (lb/ton wetcake)	Potential Estimated Emissions (lb/hr)	Potential Estimated Emissions (tpy)
non-detect	Acetaldehyde	0.001	5.56E-05	5.85E-03	2.56E-02
non-detect	Acrolein	0.00017	9.17E-06	9.64E-04	4.22E-03
	Acetic Acid	0.08	4.44E-03	4.68E-01	2.05E+00
	Ethanol	0.02	1.11E-03	1.17E-01	5.12E-01
non-detect	Formaldehyde	0.002	1.11E-04	1.17E-02	5.12E-02
non-detect	Formic Acid				
non-detect	2-furaldehyde			SEC 107 SEC	20 M SS
non-detect	Methanol	0.00125	6.94E-05	7.31E-03	3.20E-02
VOC Total				0.610	2.67
HAPs Total	-			0.026	0.11

^{*}Emission estimates based on November 2, 2004 emission testing at wetcake storage building at

^{**1/2} the detection limit used as emission estimate for non-detect results.

Pacific Ethanol Magic Valley, LLC Equipment Leak VOC Emissions, FS04

Process Stream	Equipment Component		Component	Emission Factor ***	Uncontrolled Rate****	LDAR Control	Controlled Rate	TOC weight**	VOC Emissions	VOC Emissions
Judani	Source	Product	Count*	(lb/comphr)	(lb/hr)	Effectiveness	(lb/hr)	(%)	(lb/hr)	(tpy)
	Valves	Gas/Vapor	0.0	0.01316	0.00	87%	0.00	13.00%	0.00	0.00
	Valves	Gas/Vapor	90.0	0.00888	0.80	84%	0.13	13.00%	0.02	0.07
	Pumps	Light Liquid	6.0	0.04387	0.26	69%	0.08	13.00%	0.01	0.05
Fermentation	Compressor Seals	Gas/Vapor	0.0	0.50265	0.00	75%	0.00	13.00%	0.00	0.00
ennentation	Pressure-Relief Valves	Gas/Vapor	5.0	0.22928	1.15	95%	0.06	13.00%	0.01	0.03
	Sampling Connections	All	0.0	0.03307	0.00	87%	0.00	13.00%	0.00	0.00
	Open-ended Lines	All	5.0	0.00376	0.02	84%	0.00	13.00%	0.00	0.00
L	Flanges (connectors)	All	166.0	0.00403	0.67	84%	0,11	13.00%	0.01	0.06
	Valves	Gas/Vapor	45.0	0.01316	0.59	87%	0.08	81.70%	0.06	0.28
	Valves	Light Liquid	22.0	0.00888	0.20	84%	0.03	87.10%	0.03	0.12
	Pumps	Light Liquid	7.0	0.04387	0.31	69%	0.10	81.70%	0.08	0.34
Distillation	Compressor Seals	Gas/Vapor	0.0	0.50265	0.00	75%	0.00	81.70%	0.00	0.00
Distillation	Pressure-Relief Valves	Gas/Vapor	7.0	0.22928	1.60	95%	0.08	81.70%	0.07	0.29
	Sampling Connections	All	0.0	0.03307	0.00	87%	0.00	81.70%	0.00	0.00
	Open-ended Lines	All	15.0	0.00376	0.06	84%	0.01	81.70%	0,01	0.03
	Flanges (connectors)	All	190.0	0.00403	0.77	84%	0.12	81.70%	0.10	0.44
	Valves	Gas/Vapor	0.0	0.01316	0.00	87%	0.00	100.00%	0.00	0.00
	Valves	Light Liquid	70.0	0.00888	0.62	84%	0.10	100.00%	0.10	0.44
i í	Pumps	Light Liquid	5.0	0.04387	0.22	69%	0.07	100.00%	0.07	0.30
Tank Farm	Compressor Seals	Gas/Vapor	0.0	0.50265	0.00	75%	0.00	100.00%	0.00	0.00
Jank Failii	Pressure-Relief Valves	Gas/Vapor	5.0	0.22928	1.15	95%	0.06	100.00%	0.06	0.25
1 [Sampling Connections	All	0.0	0.03307	0.00	87%	0.00	100.00%	0.00	0.00
[Open-ended Lines	All	6.0	0.00376	0.02	84%	0.00	100.00%	0.00	0.02
	Flanges (connectors)	All	110.0	0.00403	0.44	84%	0.07	100.00%	0.07	0.31
Total			754.0		8.87		1.09		0.69	3.02

HAP Emission Calculation

		Emissions
Pollutant	Fraction	(tpy)
Acetaldehyde	2.00E-04	6.04E-04
Methanol	2.00E-04	6.04E-04
Benzene	2.50E-03	7.55E-03
Carbon Disulfide	2.00E-05	6.04E-05
Cumene	1.00E-03	3.02E-03
Ethylbenzene	5.00E-05	1.51E-04
n-Hexane	5.00E-02	1.51E-01
Toluene	5.00E-03	1.51E-02
Xylenes	5.00E-04	1.51E-03
Total		0.18

^{**}Component counts are based on Subpart VV equipment inventory from Delta T.

**TOC is considered to be worst case for each process stream identified.

***Emission factors taken from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017. Table 2-1 and Table 5-2.

***Emission rate is taken from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, and based on the Leak Detection and Repair Program.

Pacific Ethanol Magic Valley, LLC Cooling Tower Emissions, FS05

Cooling tower PM emissions are based on an induced draft cooling tower with a circulating water flow rate of 15,000 gallons per minute (gpm) and a conservative drift (0.005% of the circulating water flow). Calculations assume a total dissolved solids concentration of 2,000 ppm.

			Total		PM/PM ₁₀	PM/PM ₁₀ /PM _{2.5}	PM/PM ₁₀ /PM _{2.5}
Circulating Flow Rate	Circulating Flow Rate	Total Drift	Drift	Total Drift	Emissions	Emissions	Emissions
(gallons/minute)	(gallons/hour)	(% circulating flow)	(gal/hr)	(lb/hr)	(lb/day)	(lb/yr)	(tpy)
15,000	900,000	0.005%	45.00	360.00	18.01	6,575	3.29

Density of Cooling Water =	8.34	lb/gal
TDS =	2,000	ppm

Production Throughputs for Pacific Ethanol Magic Valley, LLC

Undenatured ethanol throughput:

60 MMgal/yr (proposed limit)

Denaturant throughput:

3.000 MMgal/yr (assuming 5% by volume of ethanol produced which is 4% by weight)

Denatured ethanol (fuel) throughput:

63.00 MMgal/yr (denatured ethanol)

Corn Processed:

22.5 MMBu/yr

629213 tpy

71.8 ton/hr

Assuming 2.67 gal EtOH per bushel of com and 56 lb/Bu

Maximum Wetcake Produced

196629 tpy DDGS

22.4 ton/hr DDGS

70.1 ton/hr Wetcake

Assuming 17.5 lb DDGS per bushel of corn and wetcake contains 32% DDGS solids

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

ldei	ntif	icat	lior	

User Identification:

PAC - Burley- TK01

City:

Burley Idaho

State: Company:

Pacific Ethanol Magic Valley, LLC Internal Floating Roof Tank

1.00

Type of Tank: Description:

Off-spec Tank

Tank Dimensions

Diameter (ft): 25.00 Volume (gallons): 174,500.00 Turnovers: 3.44 Self Supp. Roof? (y/n): Ν No. of Columns: 1.00 Eff. Col. Diam. (ft):

Paint Characteristics

Internal Shell Condition: Light Rust Shell Color/Shade: White/White Shell Condition Good Roof Color/Shade: White/White Roof Condition: Good

Rim-Seal System

Primary Seal: Liquid-mounted Secondary Seal None

Deck Characteristics

Deck Fitting Category: Detail Deck Type: Welded

Deck Fitting/Status

	-
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	i
Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
∂ Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	i

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

Quantity

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK01 - Internal Floating Roof Tank Burley, Idaho

		**************************************			***************************************	annoenere zu zuenen		***************************************			***************	***************************************	
Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp Vapor Pressure (psia)		Vapor Mol.		Vapor Mass	Mol.	Basis for Vapor Pressure				
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Commence of the commence of th					***************************************								
Ethyl alcohol	All	48.21	41.93	54.49	46.37	0.4341	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK01 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb): Seal Factor A (lb-mole/ft-yr): Seal Factor B (lb-mole/ft-yr (mph)^n): Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	16.2476 1.6000 0.3000 0.0088 0.4341
Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole): Product Factor:	25.0000 46.0700 1.0000
Withdrawal Losses (lb): Number of Columns: Effective Column Diameter (ft): Annual Net Throughput (gal/yr.): Shell Clingage Factor (bb//1000 sqft): Average Organic Liquid Density (lb/gal): Tank Diameter (ft):	5.5565 1.0000 1.0000 600,000.0000 0.0015 6.6100 25.0000
Deck Fitting Losses (lb); Value of Vapor Pressure Function; Vapor Molecular Weight (lb/lb-mole); Product Factor; Tot. Roof Fitting Loss Fact.(lb-mole/yr);	86.7624 0.0088 46.0700 1.0000 213.6000
Deck Seam Losses (lb): Deck Seam Length (ft): Deck Seam Loss per Unit Length	0.0000 0.0000
Factor (Ib-mole/ft-yr): Deck Seam Length Factor(ft/sqft): Tank Diameter (ft): Vapor Molecular Weight (Ib/lb-mole): Product Factor;	0.0000 0.0000 25.0000 46.0700 1.0000
Total Losses (lb):	108.5665

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in, Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in, Diam.)/Built-Up ColSilding Cover, Gask. Ladder Well (36-in, Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe an Well/Adjustable Sample Pipe an Well/Adjustable Vacuum Breaker (10-in, Diam.)/Weighted Mech. Actuation, Gask.	1	31.00	5.20	1.30	12.5919
	1	4.30	17.00	0.38	1.7466
	1	33.00	0.00	0.00	13.4043
	1	56.00	0.00	0.00	22.7467
	9	7.90	0.00	0.00	28.8802
	1	12.00	0.00	0.00	4.8743
	1	6.20	1.20	0.00	2.5184

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK01 - Internal Floating Roof Tank Burley, Idaho

	Losses(lbs)										
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions						
Ethyl alcohol	16.25	5.56	86.76	0.00	108.57						

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

	ıtif		

User Identification:

PAC - Burley- TK02

City: State: Burley Idaho

Ν

Company: Type of Tank: Description:

Pacific Ethanol Magic Valley, LLC Internal Floating Roof Tank Denaturant Storage Tank

Tank Dimensions

Diameter (ft): Volume (gallons): Turnovers:

20.42 58.750.00 51.06

Self Supp. Roof? (y/n):

1.00

No. of Columns: Eff. Col. Diam. (ft):

1.00

Paint Characteristics

Internal Shell Condition: Shell Color/Shade: Shell Condition Roof Color/Shade:

Light Rust White/White Good White/White

Roof Condition:

Good

Rim-Seal System

Primary Seal: Secondary Seal Liquid-mounted

None

Deck Characteristics

Deck Fitting Category: Deck Type:

Detail Welded

Deck Fitting/Status

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	8
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK02 - Internal Floating Roof Tank Burley, Idaho

Daily Liquid Surf. Temperature (deg F)					Liquid Bulk Temp	Bulk		Vapor Liquid Mol. Mass			Mol.	Basis for Vapor Pressure	
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Gasoline (RVP 10)	All	48.21	41.93	54.49	46.37	4.1037	N/A	N/A	66,0000		***************************************	92.00	Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK02 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb): Seal Factor A (lb-mole/ft-yr): Seal Factor B (lb-mole/ft-yr (mph)^n): Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	213.2354 1.6000 0.3000 0.0989 4.1037
Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole): Product Factor:	20.4200 66,0000 1.0000
Withdrawal Losses (lb): Number of Columns: Effective Column Diameter (ft): Annual Net Throughput (gal/yr.): Shell Clingage Factor (bb/1000 sqft): Average Organic Liquid Density (lb/gal): Tank Diameter (ft):	29.0650 1.0000 1.0000 3,000,0000 0.0015 5.6000 20.4200
Deck Fitting Losses (lb): Value of Vapor Pressure Function: Vapor Molecular Weight (lb/lb-mole): Product Factor: Tot. Roof Fitting Loss Fact.(lb-mole/yr):	1,342.5108 0.0989 66,0000 1.0000 205,7000
Deck Seam Losses (lb): Deck Seam Length (ft): Deck Seam Loss per Unit Length	0.0000 0.0000
Factor (Ib-mole/ft-yr): Deck Seam Length Factor(ft/sqft): Tank Diameter (ft): Vapor Molecular Weight (Ib/Ib-mole): Product Factor:	0,0000 0,0000 20,4200 66,0000 1,0000
Total Losses (lb):	1,584.8112

Roof Fitting/Status	Quantity		Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(ib)
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 8 1 1	31.00 4.30 33.00 56.00 7.90 12.00 6.20	5.20 17.00 0.00 0.00 0.00 0.00 1.20	1.30 0.38 0.00 0.00 0.00 0.00	202.3230 28.0642 215.3761 365.4866 412.4778 78.3186 40.4646

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK02 - Internal Floating Roof Tank Burley, Idaho

			Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 10)	213.24	29.07	1,342.51	0.00	1,584.81

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

14.	-4:6		•
ıue	ntit	icat	lon

User Identification:

PAC - Burley- TK03

City:

Burley Idaho

State: Company:

Pacific Ethanol Magic Valey, LLC

Type of Tank:

Internal Floating Roof Tank

Description:

200 Proof Storage Tank

Tank Dimensions

Diameter (ft):

25.00

Volume (gallons): Turnovers:

174,500.00

171.92

Self Supp. Roof? (y/n): No. of Columns:

Eff. Col. Diam. (ft):

1.00 1.00

Paint Characteristics Internal Shell Condition:

Shell Color/Shade:

Light Rust White/White

Shell Condition

Good

Roof Color/Shade:

White/White

Roof Condition:

Good

Ν

Rim-Seal System

Primary Seal:

Liquid-mounted

Secondary Seal

None

Deck Characteristics

Deck Fitting Category:

Detail

Deck Type:

Welded

Deck Fitting/Status

Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	- 1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	- :
Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask.	1
Column Well (24-ii). Diam, Jr. Buill-Op ColSilding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	,
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	9
	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

Quantity

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK03 - Internal Floating Roof Tank Burley, Idaho

Commission		***************************************	***************************************	Tarrest Science Section 1991	Kamana akakayaa			***************************************	***************************************		***************************************		
			ily Liquid Su perature (de		Liquid Bulk Temp	Vanor	Pressure	(neia)	Vapor Mol.	Liquid Mass	Vapor	Mal	Davis for Vess - Davis -
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Ethyl alcohol	Ali	48.21	41,93	54.49	46.37	0.4341	N/A	N/A	46.0700			46.07	Option 2: A=8,321, B=1718.21, C=237.52

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK03 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb):	16.2476
Seal Factor A (Ib-mole/ft-yr):	1,6000
Seal Factor B (lb-mole/ft-yr (mph)^n): Value of Vapor Pressure Function:	0.3000 0.0088
Vapor Pressure at Daily Average Liquid	0,000,0
Surface Temperature (psia):	0.4341
Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole);	25.0000
Product Factor:	46.0700 1.0000
	1,0000
Withdrawal Losses (lb): Number of Columns:	277.8240
Effective Column Diameter (ft):	1.0000 1.0000
Annual Net Throughput (gal/yr.):	30,000,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal):	6.6100
Tank Diameter (ft):	25.0000
Deck Fitting Losses (lb):	86.7624
Value of Vapor Pressure Function:	0.0088
Vapor Molecular Weight (lb/lb-mole): Product Factor:	46.0700 1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr);	213,6000
Destroy I was	
Deck Seam Losses (lb): Deck Seam Length (ft):	0.0000 0.0000
Deck Seam Loss per Unit Length	0.0000
Factor (lb-mole/ft-yr):	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000
Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole);	25,0000 46,0700
Product Factor:	1,0000
Total Losses (lb):	380.8340

Roof Fitting/Status	Quantity		Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Suilt-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 9 1	31.00 4.30 33.00 56.00 7.90 12.00 6.20	5.20 17.00 0.00 0.00 0.00 0.00 1.20	1.30 0.38 0.00 0.00 0.00 0.00 0.00	12.5919 1.7466 13.4043 22.7467 28.8802 4.8743 2.5184

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK03 - Internal Floating Roof Tank Burley, Idaho

			Losses(lbs)	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999	
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Ethyl alcohol	16.25	277.82	86.76		380.83

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

и	an	tifi	cati	OD.

User Identification:

PAC - Burley- TK04

City:

Burley

State: Company: Idaho Pacific Ethanol Magic Valley, LLC

Type of Tank: Description:

Internal Floating Roof Tank 200 Proof Storage Tank

Tank Dimensions

Diameter (ft): Volume (gallons): Turnovers: 25.00

174,500.00

Self Supp. Roof? (y/n):

171.92

No. of Columns:

1.00 1.00

Eff. Col. Diam. (ft):

Ν

Paint Characteristics

Internal Shell Condition: Shell Color/Shade: Shell Condition

Light Rust White/White Good

Roof Color/Shade:

White/White

Roof Condition:

Good

Rim-Seal System

Primary Seal: Secondary Seal Liquid-mounted

None

Deck Characteristics

Deck Fitting Category: Deck Type:

Detail

Welded

Deck Fitting/Status

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 9 1

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK04 - Internal Floating Roof Tank Burley, Idaho

Near and a second a			aily Liquid S perature (d		Liquid Bulk Temp	Vapo	r Pressure	(psia)	Vapor Mol.	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Ethyl alcohol	All	48.21	41.93	54.49	46.37	0.4341	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK04 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb):	16,2476
Seal Factor A (lb-mole/ft-yr):	1.6000
Seal Factor B (lb-mole/ft-yr (mph)^n): Value of Vapor Pressure Function:	0.3000 0.0088
Vapor Pressure at Daily Average Liquid	0.000
Surface Temperature (psia):	0.4341
Tank Diameter (ft):	25,0000
Vapor Molecular Weight (lb/lb-mole): Product Factor:	46.0700
Product Factor.	1.0000
Withdrawal Losses (lb):	277.8240
Number of Columns:	1.0000
Effective Column Diameter (ft): Annual Net Throughput (gal/yr.):	1.0000 30,000,000.000
Shell Clingage Factor (bbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal):	6.6100
Tank Diameter (ft):	25.0000
Deck Fitting Losses (lb):	86.7624
Value of Vapor Pressure Function:	0.0088
Vapor Molecular Weight (lb/lb-mole):	46.0700
Product Factor: Tot. Roof Fitting Loss Fact.(lb-mole/yr):	1,0000 213,6000
Total Noor Fitting Load Fact (ID-Molery).	213.0000
Deck Seam Losses (lb):	0,0000
Deck Seam Length (ft): Deck Seam Loss per Unit Length	0.0000
Factor (lb-mole/ft-yr):	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000
Tank Diameter (ft):	25,0000
○Vapor Molecular Weight (lb/lb-mole): ○ Product Factor:	46.0700
FIDGUCE ECIUI,	1.0000
÷	
Total Losses (lb):	380.8340

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 9 1	31.00 4.30 33.00 56.00 7.90 12.00	5.20 17.00 0.00 0.00 0.00 0.00 1.20	1.30 0.38 0.00 0.00 0.00 0.00 0.94	12.5919 1.7466 13.4043 22.7467 28.8802 4.8743 2.5184

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK04 - Internal Floating Roof Tank Burley, Idaho

		Losses(lbs)								
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions					
Ethyl alcohol	16.25	277.82	86.76	0.00	380.83					

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

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User Identification:

PAC - Burley- TK05

City:

Burley Idaho

Ν

State: Company:

Pacific Ethanol Magic Valley, LLC

Type of Tank:

Internal Floating Roof Tank

Description:

Denatured Ethanol Storage Tank

Tank Dimensions

Diameter (ft): Volume (gallons): 40.00 587,000.00

Turnovers:

53.66

Self Supp. Roof? (y/n): No. of Columns:

1.00

Eff. Col. Diam. (ft):

1.00

Paint Characteristics

Internal Shell Condition: Shell Color/Shade: Light Rust White/White

Shell Condition
Roof Color/Shade:

Good White/White

Roof Condition: Good

Rim-Seal System
Primary Seal:
Secondary Seal

Liquid-mounted

None

Deck Characteristics

Deck Fitting Category: Deck Type:

Detail Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	i
Roof Leg or Hanger Well/Adjustable	12
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1 1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	i
	•

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

Quantity

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK05 - Internal Floating Roof Tank Burley, Idaho

		**************************************	***************************************				***************************************	***************************************					
Daily Liquid Surf. Temperature (deg F)				Pressure	Vapor essure (psia) Mol.				Mol.	Basis for Vapor Pressure			
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Denatured Ethanol Ethyl alcohol Gasoline (RVP 10)	Ali	48.21	41.93	54,49	46.37	0.5284 0.4341 4.1037	N/A N/A N/A	N/A N/A N/A	50.0449 46.0700 66.0000	0.9500 0.0500	0.7370 0.2630	47.25 46.07 92.00	Option 2: A=8.321, B=1718.21, C=237.52 Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK05 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb):	34.5019
Seal Factor A (lb-mole/ft-yr):	1,6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0,3000
Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid	0.0108
Surface Temperature (psia):	0.5284
Tank Diameter (ft):	40.0000
Vapor Molecular Weight (lb/lb-mole):	50.0449
Product Factor:	1.0000
Withdrawal Losses (lb):	178.0864
Number of Columns:	1.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	31,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal):	6.5509
Tank Diameter (ft):	40.0000
Deck Fitting Losses (lb):	127.9264
Value of Vapor Pressure Function:	0.0108
Vapor Molecular Weight (lb/lb-mole):	50.0449
Product Factor:	1.0000
Tot, Roof Fitting Loss Fact.(lb-mole/yr):	237.3000
Deck Seam Losses (lb):	0.0000
Deck Seam Length (ft):	0.0000
Deck Seam Loss per Unit Length	
Factor (ib-mole/ft-yr):	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000
Tank Diameter (ft):	40.0000
Vapor Molecular Weight (lb/lb-mole):	50,0449
Product Factor:	1.0000
Total Losses (lb);	040 54 47
10tal 200060 (ID).	340.5147

Roof Fitting/Status	Quantity		Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Sluilt-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 12 1	31.00 4.30 33.00 56.00 7.90 12.00 6.20	5.20 17.00 0.00 0.00 0.00 0.00 1.20	1.30 0.38 0.00 0.00 0.00 0.00 0.00	16.7118 2.3181 17.7900 30.1891 51.1059 6.4691 3.3424

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK05 - Internal Floating Roof Tank Burley, Idaho

			Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Denatured Ethanol	34.50	178.09	127.93	0.00	340.51
Ethyl alcohol	25.43	169.18	94.28	0.00	288.89
Gasoline (RVP 10)	9.07	8.90	33.65	0.00	51.63

TANKS 4.0.9d

Emissions Report - Detail Format Tank Indentification and Physical Characteristics

ld	en	tific	atio	n
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User Identification: PAC - Burley- TK06

City: Burley

State: Idaho

Company: Pacific Ethanol Magic Valley, LLC Type of Tank: Internal Floating Roof Tank Description: Denatured Ethanol Storage Tank

Tank Dimensions

Diameter (ft): 40.00 Volume (gallons): 587,000.00 Turnovers: 53.66 Ν

Self Supp. Roof? (y/n):

No. of Columns: 1.00 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust Shell Color/Shade: White/White Shell Condition Good Roof Color/Shade: White/White Roof Condition: Good

Rim-Seal System

Primary Seal: Liquid-mounted

Secondary Seal None

Deck Characteristics

Deck Fitting Category: Detail Deck Type: Welded

Deck Fitting/Status

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	12
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Pocatello, Idaho (Avg Atmospheric Pressure = 12.53 psia)

TANKS 4.0.9d Emissions Report - Detail Format Liquid Contents of Storage Tank

PAC - Burley- TK06 - Internal Floating Roof Tank Burley, Idaho

	Daily Liquid Sur Temperature (deg				Liquid Bulk Temp	Vapor Pressure (psia)		Vapor Mol.		Vapor Mass	Mol.	Basis for Vapor Pressure	
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Denatured Ethanol Ethyl alcohol Gasoline (RVP 10)	All	48.21	41.93	54.49	46.37	0.5284 0.4341 4.1037	N/A N/A N/A	N/A N/A N/A	50.0449 46.0700 66.0000	0.9500 0.0500	0.7370 0.2630	47.25 46.07 92.00	Option 2: A=8.321, B=1718.21, C=237.52 Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

PAC - Burley- TK06 - Internal Floating Roof Tank Burley, Idaho

Annual Emission Calcaulations	
Rim Seal Losses (lb): Seal Factor A (lb-mole/ft-yr): Seal Factor B (lb-mole/ft-yr (mph)^n): Value of Vapor Pressure r Lonction: Vapor Pressure at Daily Average Liquid Surface Temperature (psia): Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole): Product Factor:	34.5019 1.6000 0.3000 0.0108 0.5284 40.0000 50.0449 1.0000
Withdrawal Losses (lb): Number of Columns: Effective Column Diameter (ft): Annual Net Throughput (gal/yr.): Shell Clingage Factor (bbl/1000 sqft): Average Organic Liquid Density (lb/gal): Tank Diameter (ft):	178.0864 1.0000 1.0000 31,500,000.0000 0.0015 6.5509 40.0000
Deck Fitting Losses (lb): Value of Vapor Pressure Function: Vapor Molecular Weight (lb/lb-mole): Product Factor: Tot. Roof Fitting Loss Fact.(lb-mole/yr):	127.9264 0.0108 50.0449 1.0000 237.3000
Deck Seam Losses (lb): Deck Seam Length (ft): Deck Seam Length (ft): Deck Seam Length Factor (lb-mole/ft-yr): Deck Seam Length Factor(ft/sqft): Tank Diameter (ft): Vapor Molecular Weight (lb/lb-mole): Product Factor:	0.0000 0.0000 0.0000 0.0000 40.0000 50.0449 1.0000
Total Losses (lb):	340.5147

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFb(lb-mole/(yr mph^n))	m	Losses(Ib)
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Gasketed Column Well (24-in. Diam.)/Built-Up ColSliding Cover, Gask. Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1 1 1 1 12 1	31.00 4,30 33.00 56.00 7.90 12.00 6.20	5.20 17.00 0.00 0.00 0.00 0.00 1.20	1.30 0.38 0.00 0.00 0.00 0.00 0.00	16.7118 2.3181 17.7900 30.1891 51.1059 6.4691 3.3424

TANKS 4.0.9d Emissions Report - Detail Format Individual Tank Emission Totals

Emissions Report for: Annual

PAC - Burley- TK06 - Internal Floating Roof Tank Burley, Idaho

		100	Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Denatured Ethanol	34.50	178.09	127.93	0.00	340.51
Ethyl alcohol	25.43	169.18	94.28	0.00	288.89
Gasoline (RVP 10)	9.07	8.90	33.65	0.00	51.63

Attachment C IDEQ Forms



DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3 04/03/07

Please see instructions on page 2 before filling out the form.

C	OMPANY	NAME, FACILITY NAME, AND FACILITY ID NUMBE	R
1. Company	/ Name	Pacific Ethanol Inc.	
2. Facility N	Name	Pacific Ethanol Magic 3. Facility ID No. 031-0 Valley, LLC	0032
4. Brief Pro	oject Descrip Ice or less	tion - Install Regenerative Thermal Oxider instead of RCO, vent g scrubber venting to RTO, increased grain throughput	as
		PERMIT APPLICATION TYPE	
		New Source at Existing Facility Unpermitted Existing So	urce
	, ,	Source: Permit No.: <u>P-2008.0025</u> Date Issued: <u>03/28/2008</u>	
	·····	orcement Action: Case No.:	
6. 🔀 Mino	or PTC	Major PTC	
		FORMS INCLUDED	DEQ
Included	N/A	Forms	Verify
	\boxtimes	Form GI – Facility Information	
	×	Form EU0 – Emissions Units General	
	×	Form EU1 - Industrial Engine Information Please Specify number of forms attached:	
	\boxtimes	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached:	
	\boxtimes	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached:	
	Ø	Form EU4 - Cooling Tower Information Please Specify number of forms attached:	
	\boxtimes	Form EU5 – Boiler Information Please Specify number of forms attached:	
	\boxtimes	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached:	
	\boxtimes	Form CBP - Concrete Batch Plant Please Specify number of forms attached:	
		Form BCE - Baghouses Control Equipment	
	×	Form SCE - Scrubbers Control Equipment	
\boxtimes		Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	
	\boxtimes	PP Plot Plan	
	\boxtimes	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	
	\boxtimes	Form FRA – Federal Regulation Applicability	

DEQ USE ONLY Date Received	
Project Number	
	_
Payment / Fees Included? Yes ☐ No ☐	
Check Number	



DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the

PERMIT TO CONSTRUCT APPLICATION Revision 3 4/5/2007

Air Permit Hotline - 1-877-5PERMIT Please see instructions on page 2 before filling out the form. Company Name: Pacific Ethanol, Inc Pacific Ethanol Magic Valley, LLC Facility Name: 031-00032 Facility ID No.: Brief Project Description: Fuel Grade Ethanol Production

Brief Project Description:	Fuel Grade Eth	anoi Production						TANIETO ES	INT COMPS	123	havan yang darapan		
	Gibbon-unemerkenmenteren er	MARY OF FA	WYCHIES:	DE EMISSIC	IN RATES F	ORCRITE	RIA POLLU 3		INT SOURC	, = `			
1.	2.	PM		SC	<u>. </u>	NO		C	0	VC	oc .	Le	ad
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
					Point Sou	ırce(s)							
Corn Receiving Baghouse	SV01	0.86	3.75										
Corn Handling Baghouse	SV02	0.43	1.88										
Corn Bin #1 Spot Filters	SV03	0.03	0.15										
Corn Bin #2 Spot Filters	SV04	0.03	0.15										
Surge Bin Spot Filters	SV05	0.02	0.08										
Hammermilling Baghouse	SV06	0.39	1.69										
Boiler #1	SV09	0.56	2.47	0.04	0.19	3.78	16.56	2.39	10.48	0.41	1.78		
Boiler #2	SV10	0.56	2.47	0.04	0.19	3.78	16.56	2.39	10.48	0.41	1.78		
Boiler #3	SV11	0.56	2.47	0.04	0.19	3.78	16.56	2.39	10.48	0.41	1.78		
Regenerative Thermal Oxidizer	SV12	0.05	0.20	0.00	0.02	0.30	1.31	0.51	2.25	5.06	22.63		
190 Proof Tank										0.01	0.05		
Denaturant Storage Tank										0.18	0.79		
200 Proof Storage Tank #1										0.04	0.19		
200 Proof Storage Tank #2										0.04	0.19		
Denatured Ethanol Tank #1										0.04	0.17		
Denatured Ethanol Tank #2										0.04	0.17		
Loadout Flare	5113	reg	1 es	Neg	Nes	0.56	243	0.93	4.06	0.96	4.20		
			,	,									
													-
						1210	(a .1:	1		★ • · · ·	06:15		
Total		3.49	15.31	0.12	0.59	12.19	53.41	8.62	37.75	17.01	39.215		1.

Salah Barana.										-	**************************************	1134 6 64141	775 K 47775 K T
	DEQ AIR QUAL								Р	ERMIT TO	CONSTR	UCT APPL	
	1410 N. Hilton,	Boise, ID 837	06										Revision 3
- 10 h	For assistance,	call the											4/5/2007
	Air Permit Hotl	ine - 1-877-5F	PERMIT										
			P	lease see instr	uctions on pag	je 2 before fillin	g out the form.						
Company Name:	Pacific Ethanol,	Inc											
Facility Name:		Pacific Ethanol Magic Valley, LLC											
Facility ID No.:		031-00032											
Brief Project Description:	Fuel Grade Ethi	anol Productio	n										
	SUM	MARY OF F	ACILITY W	IDE EMISSI	ON RATES	FOR CRITE	RIA POLLU	TANTS - PO	INT SOUR	CES			
1.	2.						3	3.					
		Pñ	N ₁₀	l s	O ₂	N	Ox	СО		VC	C	Le	ad
Emissions units	Stack ID	lb/hr	T/vr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
					Point So	ource(s)							

Instructions for Form El-CP1

This form is designed to provide the permit writer and air quality modeler with a summary of the criteria pollutant emissions of each emission unit/point located at the facility. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

- 1. Provide the name of all emission units at the facility. This name must match names on other submittals to IDEQ and within this application.
- 2. Provide the identification number for the stack which the emission unit exits.
- 3. Provide the emission rate in pounds per hour and tons per year for all criteria pollutants emitted by this point source. In this form, emission rates for a point source are the maximum allowable emissions for both short term (pounds per hour) and long term (tons per year). These emission rates are its permitted limits (if any). Otherwise, potential to emit should be shown. Potential to emit is defined as uncontrolled emissions at maximum design or achievable capacity (whichever is higher) and year-round continuous operation (8760 hours per year) if there are no federally enforceable permit limits on the emission point. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, the control efficiency or proposed permit limit(s) may be used in calculating potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

1.30

5.69



Total

DEQ AIR QUALITY PROGRAM

6.32

27.69

PERMIT TO CONSTRUCT APPLICATION

	1410 N. Hilton, Boise, ID 83706 For assistance, call the Air Permit Hotline - 1-877-5PERMIT			Revision 2 4/5/2007											
			Ple	ease see instr	uctions on pag	e 2 before fillin	g out the form.								
Company Name		ıc													
Facility Name	:	Pacific Ethanol Magic Valley, LLC													
Facility ID No.	5 to O to 5th	-15-1					031-00032								
Brief Project Description	: Fule Grade Ethan	SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - FUGITIVE SOURCES													
1.	2.														
	1	PM		S	O_2	l N	O _x	CO VOC				ا ا	ad		
Fugitive Source Name	Fugitive ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr		
					Fugitive S										
Fruck Traffic	FS01	3.32	14.55												
Grain Handling	FS02	1.47	6.44												
Wetcake Storage	FS03									0.61	2.67				
Equipment Leaks	FS04									0.69	3.02	· · · · · · · · · · · · · · · · · · ·			
Cooling Towers	FS05	0.75	3.29												
Grain Loadout	FS06	0.22	0.95												
Grain Flaking	FS07	0.56	2.46												
					/										
-0.0															
· · · · · · · · · · · · · · · · · · ·															
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A.C.								<u> </u>							
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Agreed Living														
	DEQ AIR QUALIT	Y PROGRAM		PERMIT TO CONSTRUCT APPLICATION										
46.50	1410 N. Hilton, Bo	ise, ID 83706		F										
	For assistance, ca	all the		1										
	Air Permit Hotlin	e - 1-877-5PEF	TIMS	l										
yetti ka			P	lease see instr	ructions on pag	e 2 before fillin	g out the form.							
Company Name:	Pacific Ethanol, In	ific Ethanol, Inc												
Facility Name:		Pacific Ethanol Magic Valley, LLC												
Facility ID No.:		031-00032												
Brief Project Description:	Fule Grade Ethan	ol Production												
	SUMM	ARY OF FA	CILITY WIE	DE EMISSIO	N RATES F	OR CRITER	IA POLLUT	ANTS - FUC	SITIVE SOUI	RCES				
. 1.	2.							3.						
		PN	A ₁₀	S	O ₂	N	O _x		0	V	C	Lead		
Fugitive Source Name	Fugitive ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	
			Marie Mez		Fugitive S	Source(s)								

Instructions for Form EI-CP2

This form is designed to provide the permit writer and air quality modeler with a summary of the criteria pollutant emissions of each emission unit/point located at the facility. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

Fugitive emissions are those emissions that cannot reasonably be made to pass through a stack or vent or equivalent opening. Examples include coal piles, unpaved roads, etc. Fugitive emission sources at your plant must be included in this form.

- 1. Provide the name of all fugitive sources at the facility. This name must match names on other submittals to IDEQ and within this application.
- 2. Provide the identification number for the fugitive source. This ID number should match ID numbers on other submittals to IDEQ and within this application.
- 3. Provide the emission rate in pounds per hour and tons per year for all criteria pollutants emitted by this fugitive source. In this form, emission rates for a fugitive source are the maximum allowable emissions for both short term (pounds per hour) and long term (tons per year). These emission rates are its permitted limits (if any). Otherwise, potential to emit should be shown. Potential to emit is defined as uncontrolled emissions at maximum design or achievable capacity (whichever is higher) and year-round continuous operation (8760 hours per year) if there are no federally enforceable permit limits on the emission point. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, then, the control efficiency or proposed permit limit(s) may be used in calculating potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.



name of the emissions unit18 name of the emissions unit19 name of the emissions unit20 name of the emissions unit21 (insert more rows as needed)

Total

DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706

PERMIT TO CONSTRUCT APPLICATION Revision 3 4/5/2007

	For assistance, call the Air Permit Hotline - 1-877-5PERMIT												4/5/200
				Please see instr	uctions on pag	ge 2 before fillir	ng out the form	1.					,
Company Name:	Pacific Ethanol, In												
Facility Name:		Pacific Ethanol Magic Valley, LLC											
Facility ID No.:	E .) O I . E#	031-00032											
Brief Project Description:	Fuel Grade Ethan		SIONS INC	REASE (PRO	DPOSED P	re - Previo	NISLY MOT	DELEN PTE	- POINT SO	DURCES			
1.	2.			VENOL (* 11)	71.00-U			3.			Actor/2004/9-11/15/44/200		
		PI	VI ₁₀	S	O ₂	NO _x		СО		V	oc .	Le	ad
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
					Point Sc	ource(s)							
Rengenerative Thermal Oxidizer	SV12			<u> </u>						0.53	2.32		
rloadoù Flarz	19013					0.56	243	0.93	4.06	29.0	4.20		
name of the emissions unit3													
name of the emissions unit4													
name of the emissions unit5													
name of the emissions unit6													
name of the emissions unit7													
name of the emissions unit8													
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													

0.56

0.93

2.43

4.06

1.49 6.52

	DEQ AIR QUALIT 1410 N. Hilton, Bo For assistance, ca Air Permit Hotline	ise, ID 83706 II the							P	ERMIT TO	CONSTR	UCT APPL	CATION Revision 3 4/5/2007
			P	Please see instr	ructions on pag	ge 2 before filling	out the form						
Company Name:	Pacific Ethanol, Inc	C.											
Facility Name:		Pacific Ethanol Magic Valley, LLC											
Facility ID No.:		031-00032											
Brief Project Description:	Fuel Grade Ethano	ol Production					v	*U**X*********************************			4574 450 24 CV (C) 1 (A CV		www.ciidadawaa
	SUMMAR	Y OF EMISS	SIONS INC	REASE (PR	OPOSED P	TE - PREVIOI	JSLY MOD	ELED PIE)	- POINT SC	URCES			
1.	2.							3.					
		PN	PM ₁₀		O ₂	NC	NO _x		0	VC	oc	Lea	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
			inate da		Point S	ource(s)							

Instructions for Form EI-CP3

This form is designed to provide the permit writer and air quality modeler with a summary of the change in criteria pollutant emissions of each emission unit/point associated with this permit application. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

- 1. Provide the name of the emission unit. This name should match names on other submittals to IDEQ and within this application.
- 2. Provide the identification number for the stack which the emission unit exits.
- 3. Provide the increase in emissions in pounds per hour and tons per year for all criteria pollutants emitted by this emission unit. In this form, increase in emissions for an emission unit are the proposed PTE Previously modeled PTE. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, then, the control efficiency or proposed permit limit(s) may be used in calculating proposed potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

INTERNAL USE ONLY - STATIONARY SOURCE PROGRAM FEES RECEIVED FROM FACILITY

Date Stamp (Date Received in Progra	nm Office)							
RECE	IVED							
OCT 0 : 2008								
Department of Environmental Quality State Air Program								
5 to 10 7 iii 1 7	ografii							
Facility Name	PACIFIC ETITANOL							
Facility Location	BURLEY							
Fee Type:								
PTC Application Fee	Amount Received:							
PTC Processing Fee	Amount Received:							
T2 Processing Fee	Amount Received:							
PBR Registration Fee	Amount Received:							
Check Number	# 700348							
Check Date	9/30/08							
Total Amount of Check	41,000							
Signature/Date of Person Receiving	P. Ket +mon 10/1/08							